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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,531	11/06/2001	Kevin B. Todd	DKT00151	9261

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EXAMINER

MCANULTY, TIMOTHY P

ART UNIT PAPER NUMBER

3682

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,531

Applicant(s)

TODD, KEVIN B.

Examiner

Timothy P McAnulty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Embodiment I - Figure 4 in Paper No. 5, filed 28 March 2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claim 32 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected embodiment, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5, filed 28 March 2003.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first, second, and third root radii being arranged in a pattern that repeats four times around the sprocket as claimed in claims 9 and 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 9,13,17,19, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 9 is indefinite as to what the limitation “substantially repeats four times” encompasses. It is unclear exactly how many times the radii are repeated.
- b. The recitation “the fourth order” in line 2 of claim 13 and in lines 2-3 of claim 28 lacks antecedent basis.
- c. Claim 19 is indefinite as to what the limitation “substantially repeats four times” encompasses. It is unclear exactly how many times the radii are repeated.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-8,10-18, and 20-28 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,526,558 to Durham (Durham ‘558).

Durham ‘558 discloses in the figure a chain and sprocket drive system comprising a chain and a generally circular sprocket 1 having a plurality of teeth on a periphery thereof and having

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roots located between adjacent teeth wherein the roots of said sprocket include at least three different root radii as measured from the rotational center of the sprocket.

Regarding claims 2,4-7,12- 15,21-28 there is reason to believe, based on the similarity of material and structure, that the functional limitations of tensions imparted to the chain by the sprocket may be an inherent characteristic of the reference set forth above. [W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon. *In re Best*, 562 F.2d 1252, 195 USPQ 430, 433 (CCPA 1977). Accordingly, the burden is placed upon the applicant to prove that those limitations are not an inherent characteristic of the reference.

9. Claims 1-8,10-18,20-29, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ledvina et al.

Ledvina et al. discloses in figure 3, a chain and sprocket drive system comprising a chain and a generally circular sprocket having a plurality of teeth on a periphery thereof and having roots located between adjacent teeth wherein the roots of said sprocket include at least three different root radii as measured from the rotational center of the sprocket.

Regarding claims 29 and 31, Ledvina et al. further discloses in lines 64-66 of column 4, said chain and sprocket drive system used as a commercial engine timing drive.

Regarding claims 2,4-7,12-15,21-28, and 31 there is reason to believe, based on the similarity of material and structure, that the functional limitations of tensions imparted to the chain by the sprocket may be an inherent characteristic of the reference set forth above. [W]here

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the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon. *In re Best*, 562 F.2d 1252, 195 USPQ 430, 433 (CCPA 1977). Accordingly, the burden is placed upon the applicant to prove that those limitations are not an inherent characteristic of the reference.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durham '558.

Durham '558 discloses the basic apparatus as previously cited but does not specifically disclose said at least three root radii are arranged in a pattern which repeats four times around said periphery. However, the pattern is merely a matter of engineering design choice and the level of skill of one of ordinary skill in the art would produce a similar optimization, especially absent any evidence to the contrary, i.e. unexpected results.

12. Claims 9, 19, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ledvina et al.

Ledvina et al. discloses the basic apparatus as previously cited but does not specifically disclose said at least three root radii are arranged in a pattern which repeats four times around said periphery. However, the pattern is merely a matter of engineering design choice and the

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level of skill of one of ordinary skill in the art would produce a similar optimization, especially absent any evidence to the contrary, i.e. unexpected results.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art regarding sprockets in general:

US Patent No. 5,882,025 to Runnels

US Patent No. 4,193,324 to Marc


US Patent No. 3,899,932 to Durham


US Patent No. 2,344,757 to Weisberger

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P McAnulty whose telephone number is 703.308.8684. The examiner can normally be reached on Monday-Friday (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on 703.308.3668. The fax phone numbers for the organization where this application or proceeding is assigned are 703.305.7687 for regular communications and 703.305.7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.1113.

tpm 
May 29, 2003

 5/29/03
William C. Joyce
Patent Examiner